

Herring River Subwatershed Eastham, Cape Cod, Massachusetts

The Herring River Subwatershed is located in Eastham. This small watershed has an area of 665 acres and is dominated by Herring Pond and the Herring River, which connect to Cape Cod Bay. There is residential development on the east side of Herring Brook Road, but to the west it is open space.

There is a potential public health issue in Eastham associated with high nitrate levels in drinking water. Eastham has no municipal water or sewer systems, but the town is beginning to look at comprehensive water resources management, including both public water supply and alternative wastewater management.

The Inner Cape Cod Bay Area of Critical Environmental Concern (ACEC) is partially located in this watershed. It was designated in 1985 and is 2,550 acres. Within this area are almost 900 acres of saltmarsh, hundreds of acres of highly productive shellfish beds, extensive undisturbed wildlife habitat, barrier beaches, salt ponds, and tidal rivers and creeks. The nine barrier beaches within the ACEC act as natural storm buffers to protect landward areas. Several areas of historical interest from early settlements are listed with the Massachusetts Historic Commission. The area is noted for its pristine character, including feeding and nesting grounds for the endangered diamond-back terrapin and important breeding, feeding, and nesting areas for over 80 species of birds, as well as many species of mammals.

Stewards:

- Eastham Pond Stewards

Studies conducted in the watershed:

- Water Resources of Outer Cape Cod. 1998. Cape Cod Commission and Lower Cape Cod Water Management Task Force Final Report.
- Cape Cod Atlas of Tidally Restricted Salt Marshes. 2001. Cape Cod Commission.
- Source Water Assessment Program (SWAP) in Eastham, conducted by Department of Environmental Protection. Final reports available for four of the five nontransient noncommunity (NTNC) public water supply systems (such as schools) in 2002. Of 45 transient noncommunity (TNC) water suppliers (such as restaurants) in the town, 24 were assessed by 2002 with final reports available for 17 of them.
- Hydrologic Analysis of the Water Resources of Lower Cape Cod. US Geological Survey. Conducted during 2001-2003.

Who is collecting water quality data and where:

- Town of Eastham has been collecting data on private well water quality for the past year because of concern over elevated levels of nitrate in drinking water. Approximately 20% of the wells in the town were tested in 2001. Goal is to obtain a comprehensive town-wide assessment of drinking water quality over the next 3 years.
- Eastham Pond Stewards began collecting data in 2002 on Great, Bridge, Widow Harding, Herring Pond, and Jemima's Ponds, either in or just north of this subwatershed. Samples are taken once per

month June-September. Data collected: Secchi, dissolved oxygen, nitrogen, phosphate, total nutrients, and chlorophyll a. Will try to sample twice per month during the 2003 sampling season.

Management actions taken:

- Massachusetts Division of Fisheries and Wildlife stocks Herring Pond with rainbow, brook, and brown trout.
- Source Water Assessment Program (SWAP) in Eastham, conducted by Department of Environmental Protection. 2002.

Subwatershed facts: (For data sources see Appendix)

- 21 E sites: none
- Solid waste sites: none
- Zone IIs located in this watershed: none
- Interim Wellhead Protection Areas (IWPAs): none
- Percent of the undeveloped land that is protected (according to 1985/1990 data): 32.8%
- Acres of existing wetlands: 239
- Certified vernal pools: none
- Named freshwater ponds: Widow Harding, Herring (*Eastham*)
- Named rivers or creeks: Herring River
- Outstanding Resource Waters: Herring River, Herring Pond
- 1998 Massachusetts 303(d) List of Impaired Waterbodies: Great Pond – nutrients and organic enrichment/low dissolved oxygen.
- Shellfish growing areas: Herring River is prohibited to shellfishing.
- This watershed contains Natural Heritage and Endangered Species Program (NHESP) Estimated Habitats of Rare Wildlife.

Priorities:

- Develop short and long-term management plans to maintain an adequate supply of potable water, including monitoring of water quality and investigation of practicable alternatives. Explore alternatives of managing wastewater to reduce nitrogen impacts in drinking water, on shellfish habitat, and on marine water quality.
- Establish and continue private well monitoring programs to track private well water quality (from the Lower Cape Water Management Task Force's Final Report 1998).
- Study in greater detail the potential effects of groundwater pumping on the hydrology and ecology of kettle ponds and vernal pools (from the Lower Cape Water Management Task Force's Final Report 1998).
- The town and National Seashore should begin to explore institutional mechanisms for cooperatively managing the shared water resources of the Outer Cape (from the Lower Cape Water Management Task Force's Final Report 1998).
- Secure funding to support the new volunteer water quality monitoring program on 10 Eastham ponds by the Eastham Pond Stewards.
- Use the USGS Groundwater Modeling Study to identify and acquire land for future water supply sites.
- Develop and implement TMDL for Herring Pond (from DEP Watershed Status Report and Actions Taken, 2002).

Recreation:

Camping areas: none

Golf courses: none

Pathways and trails:

- Cottontail Acres
- Cape Cod Rail Trail
- www.capecodcommission.org/pathways/trailguide.htm

Public access:

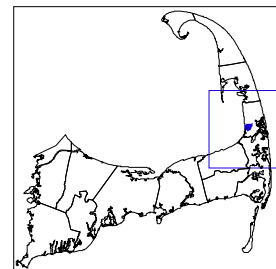
- www.state.ma.us/dfwele/pab/pabSEmap.htm

Public beaches and landings:

- First Encounter Beach, Herring Pond Beach
- Landing on Herring Pond

Herring River

Eastham, MA



Watershed Resources



0 0.3 0.6 Miles

Natural Heritage and Endangered Species Program Data

- Certified Vernal Pool
- Priority Habitats of Rare Species
- Estimated Habitats of Rare Species

Groundwater Protection Areas

- Interim Wellhead Protection Area
- Zone II
- Solid Waste Facility

Watershed Boundary

Anadromous Fish Run

Shellfish Growing Areas

- APPROVED
- CONDITIONALLY APPROVED
- MANAGEMENT CLOSURE
- PROHIBITED
- RESTRICTED
- Open Space

Streams

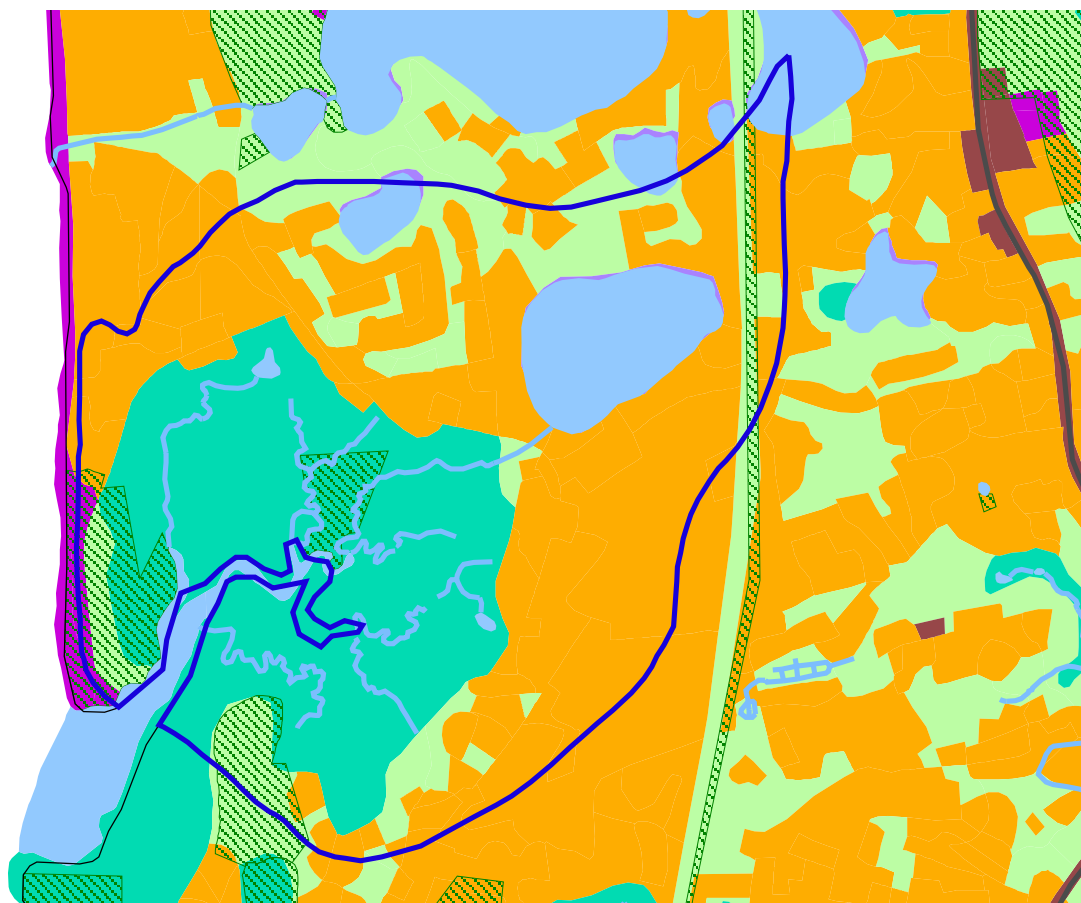
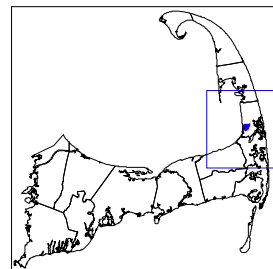
Ponds

Roads

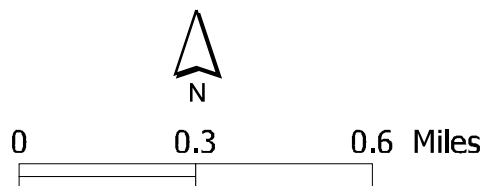


Herring River

Eastham, MA



Land Use



Land Use

